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62467

From: Jiang, Dong  
Sent: Thursday, March 14, 2002 7:04 PM  
To: STIC-Biotech/ChemLib  
Subject: interference search for SN09/706,968

priority 12/98

Please search residuads 210-345 of SEQ ID NO:2

-pending  
-issued  
-commercial

Point of Contact:  
Mona Smith  
Technical Information Specialist  
CM1 6A01  
Tel: 308-3278

Please send results on paper to Dong Jiang in 10D-08 (mail stop CM1-10C01).  
Thank you very much.

Dong Jiang (78243)  
703-305-1345  
U.S. Patent and Trademark Office  
Art Unit 1646  
dong.jiang@uspto.gov  
CM1-10D08  
Mail stop: CM1-10C01

RECEIVED  
MAR 15 2002  
STIC

Searcher: M. Smith  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: 3/17/02  
Date Completed: 3/21/02  
Searcher Prep/Review: 7  
Clerical: \_\_\_\_\_  
Online time: 7

TYPE OF SEARCH:

NA Sequences: \_\_\_\_\_  
AA Sequences: 1  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST(where applic.)

STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_

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Online time: 7

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NA Sequences: \_\_\_\_\_  
AA Sequences: 1  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST(where applic.)  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_

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DR EMBL; S66869; AAB28741.2; JOINED.
DR EMBL; S66870; AAB28741.2; JOINED.
DR EMBL; S66871; AAB28741.2; JOINED.
DR EMBL; S66872; AAB28741.2; JOINED.
DR EMBL; M29464; AAA39903.1;
DR PIR; A37359; A37359.
DR HSP; P01127; 1PDG.
DR MGD; MGI:97527; Pdga.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PDGF.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PDGF; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
KW Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing;
KW Signal.
FT SIGNAL 1 20
FT PROPEP 21 86
FT CHAIN 21 211
FT SITE 158 162
FT DISULFID 96 140
FT DISULFID 129 177
FT DISULFID 133 179
FT DISULFID 123 132
FT DISULFID 132 132
FT CARBOHYD 134 134
FT VARSPIC 194 196
FT CONFLICT 197 211
FT CONFLICT 92 92
FT CONFLICT 174 174
FT SEQUENCE 211 AA; 24102 MW; AC4345A10ECF4B39 CRC64;

REMOVED BY PROTEOLYSIS.
PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
RECEPTOR BINDING SITE (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC...).
GRR -> DVR (IN SHORT ISOFORM).
MISSING (IN SHORT ISOFORM).
V -> I (IN REF. 2).
H -> D (IN REF. 1).
Query Match 13.8%; Score 104; DB 1; Length 211;
Best Local Similarity 34.0%; Pred. No. 0.0014;
Matches 32; Conservative 12; Mismatches 34; Indels 16; Gaps 6;

QY 41 CTRNFVSIVSIREELKRTDIF--WPCGLLVKRCGGNCACCLHNCQCVPKSV---TK 94
DB 96 CKTRTVIIEIPRSQVDPTSANFLWPCVEVRCGTG---CC--NTSSVKCQPSRVHRSV 150

QY 95 KYHEVLQRPKTVGRGLHSLTDVALEHHEECDC 128
DB 151 KVAKVEYVRKKPKLKEV-----QVRLEEHLECAC 179

RESULT 12
TSIS_SMSAV STANDARD; PRT; 226 AA.
AC P01128; O41283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DE 15-JUL-1999 (Rel. 38, Last annotation update)
DE PDGF-RELATED TRANSFORMING PROTEIN P28-SIS.
GN V-SIS.
OS Simian sarcoma virus.
OC Viruses; Retroid viruses; Retroviridae; Gammaretrovirus.
OX NCBI_TaxID=11817;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=83144004; PubMed=6298772;
RA Devare S.G., Reddy E.P., Law J.D., Robbins K.C., Aaronson S.A.;
RT "Nucleotide sequence of the simian sarcoma virus genome: demonstration that its acquired cellular sequences encode the transforming gene product p28sis."
RL Proc. Natl. Acad. Sci. U.S.A. 80:731-735(1983).
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).
DR EMBL; S67520; AAB29220.2;
DR HSP; P15692; 1VPF.
DR InterPro; IPR000072; PDGF.
DR Pfam; PF00341; PDGF; 1.
DR PRODOM; PD001629; PDGF; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.

Query Match 13.8%; Score 104; DB 1; Length 226;
Best Local Similarity 33.3%; Pred. No. 0.0015;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

QY 32 LTEEVRVLYSCTPRN--FVSISIREELKRTDIF--WPCGLLVKRCGGNCACCLHNCQCQC 87
DB 73 VAEPAMIAECKTRTEVFELS--RLDRTNANFLWPCVEVRCSCG---CC--NNRNVCQ 126

QY 88 VPSKVTXYHEVLQRP-----KTGV---RGLHSLTDVALEHHEECDC 128
DB 127 RPTQV-----QLRPQVQRKIEIVRKRPFKAT-VTLEHLEKAC 165

RESULT 13
VEGH_ORFN2 STANDARD; PRT; 133 AA.
AC P52584;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR HOMOLOG PRECURSOR.
GN A2R.
OC Orf virus (strain N22) (OV N2-2).
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OX Parapoxvirus
OX NCBI_TaxID=10259;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=94076465; PubMed=8254780;
RA Lyttle D.J., Fraser K.M., Fleming S.B., Mercer A.A., Robinson A.J.;
RT "Homologs of vascular endothelial growth factor are encoded by the poxvirus orf virus."
RL J. Virol. 68:84-92(1994).
CC -1- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
CC -1- SUBUNIT: HOMODIMER; DISULFIDE-LINKED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).
DR EMBL; S67520; AAB29220.2;
DR HSP; P15692; 1VPF.
DR InterPro; IPR000072; PDGF.
DR Pfam; PF00341; PDGF; 1.
DR PRODOM; PD001629; PDGF; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
```



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RT endothelial cells."
RL [2]
RN
RP SEQUENCE FROM N.A.
RX MEDLINE=97077124; PubMed=8919691;
RA Grimmond S., Lagercrantz J., Drinkwater C., Sillins G., Townson S.,
RA Pollock P., Gotley D., Carson E., Rakar S., Nordenskjöld M., Ward L.,
RA Hayward N., Weber G.;
RT "Cloning and characterization of a novel human gene related to
RT vascular endothelial growth factor."
RL Genome Res. 6:124-131(1996).
CC -!- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS. BINDS HEPARIN.
CC -!- SUBUNIT: HOMODIMER; DISULFIDE-LINKED. CAN ALSO FORM HETERODIMER
CC WITH VEGF.
CC -!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR
CC TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN.
CC -!- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXCEPT LIVER.
CC HIGHEST LEVELS FOUND IN HEART, SKELETAL MUSCLE AND PANCREAS.
CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC -----
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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: U48801; AAB06274.1; -
CC EMBL: U43369; AAA91463.1; -
CC HSP: P15692; IVPF.
CC MIM: 601398; -
CC InterPro: IPR000072; PDGF.
CC Pfam: PF00341; PDGF.1.
CC ProDom: PD001629; PDGF.1.
CC SMART: SM00141; PDGF.1.
CC PROSITE: PS00249; PDGF_1; 1.
CC PROSITE: PS0278; PDGF_2; 1.
CC Mitogen; Growth factor; Signal; Heparin-binding.
FT SIGNAL 1 21 POTENTIAL.
FT CHAIN 22 188 VASCULAR ENDOTHELIAL GROWTH FACTOR B.
SQ SEQUENCE 188 AA; 21261 MW; F04654D5A3727194 CRC64;

Query Match 14.0%; Score 105.5; DB 1; Length 188;
Best Local Similarity 28.2%; Pred. No. 0.00086;
Matches 31; Conservative 22; Mismatches 40; Indels 17; Gaps 6;

QY 21 GRKSRVVD-LNLTFEEVRLYSCTPRNFSVSIREELKRT-DTIFWPGCLLVKRCGNCACC 78
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 30 GHRKVVSWIDVYTRA---TCQPREVVVPLTVELMGTVAQLVPSCVTVQRCG---CC 82

QY 79 LHNCNEQCQVPSKTKYKHYEVQLRPTGTGVLGHKSLTDVALEHHECDC 128
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 83 PD--DGLCEVPTGQHVQRMQILMIRYS-----SOLGEMSLERHSQCEC 124

RESULT 8
VEGF_HUMAN
ID VEGF_HUMAN STANDARD; PRT; 215 AA.
AC P15692;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR
DE PERMEABILITY FACTOR) (VPF).
GN VEGF OR VEGFA.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxId=9606;
RN [1]
RP SEQUENCE FROM N.A.

```

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RX MEDLINE=90069608; PubMed=2479986;
RA Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V., Ferrara N.;
RT "Vascular endothelial growth factor is a secreted angiogenic
RT mitogen."
RL Science 246:1306-1309(1989).
RN [2]
RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RX MEDLINE=90069609; PubMed=2479987;
RA Keck P.J., Hauser S.D., Krivi G., Sanzo K., Warren T., Feder J.,
RA Connolly D.T.;
RT "Vascular permeability factor, an endothelial cell mitogen related to
RT PDGF."
RL Science 246:1309-1312(1989).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=91268072; PubMed=1711045;
RA Tischner E., Mitchell R., Hartman T., Silva M., Gospodarowicz D.,
RA Fiddes J.C., Abraham J.A.;
RT "The human gene for vascular endothelial growth factor. Multiple
RT protein forms are encoded through alternative exon splicing."
RL J. Biol. Chem. 266:11947-11954(1991).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=92231879; PubMed=1567395;
RA Weindel K., Marne D., Weich H.A.;
RT "AIDS-associated Kaposi's sarcoma cells in culture express vascular
RT endothelial growth factor."
RL Biochem. Biophys. Res. Commun. 183:1167-1174(1992).
RN [5]
RP PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81.
RX MEDLINE=90062112; PubMed=2584205;
RA Connolly D.T., Olander J.V., Heuvelman D., Nelson R., Monseil R.,
RA Siegel N., Haymore B.L., Leimgruber R., Feder J.;
RT "Human vascular permeability factor. Isolation from U937 cells."
RL J. Biol. Chem. 264:20017-20024(1989).
RN [6]
RP SEQUENCE OF 27-41.
RX MEDLINE=93145946; PubMed=7678805;
RA Fiebig B.L., Jaeger B., Schoellmann C., Weindel K., Wilting J.,
RA Kochs G., Marne D., Hug H., Weich H.A.;
RT "Synthesis and assembly of functionally active human vascular
RT endothelial growth factor homodimers in insect cells."
RL Eur. J. Biochem. 211:19-26(1993).
RN [7]
RP X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135.
RX MEDLINE=97352774; PubMed=9207067;
RA Muller Y.A., Li B., Christinger H.W., Wells J.A., Cunningham B.C.,
RA de Vos A.M.;
RT "Vascular endothelial growth factor: crystal structure and functional
RT mapping of the kinase domain receptor binding site."
RL Proc. Natl. Acad. Sci. U.S.A. 94:7192-7197(1997).
RN [8]
RP X-RAY CRYSTALLOGRAPHY (1.93 ANGSTROMS) OF 34-135.
RX MEDLINE=98035455; PubMed=9351807;
RA Muller Y.A., Christinger H.W., Keyt B.A., de Vos A.M.;
RT "The crystal structure of vascular endothelial growth factor (VEGF)
RT refined to 1.93-A resolution: multiple copy flexibility and receptor
RT binding."
RL Structure 5:1325-1338(1997).
RN [9]
RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 39-134.
RX MEDLINE=99119204; PubMed=9922142;
RA Wiesmann C., Christinger H.W., Cochran A.G., Cunningham B.C.,
RA Fairbrother W.J., Keenan C.J., Meng G., de Vos A.M.;
RT "Crystal structure of the complex between VEGF and a receptor-blocking
RT peptide."
RL Biochemistry 37:17765-17772(1998).
RN [10]
RP STRUCTURE BY NMR OF 34-135.
RX MEDLINE=97477915; PubMed=9336848;
RA Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A.,
RA Starovastnik M.A.;
RT "1H, 13C, and 15N backbone assignment and secondary structure of the

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[illegible]



A:Residues: 1-226 <MER>  
 A:Cross-references: GB:M2327; NID:g214648; PIDN:AAA49927.1; PID:g214649  
 C:Superfamily: platelet-derived growth factor

Query Match	14.3%;	Score 108;	DB 2;	Length 226;
Best Local Similarity	30.8%;	Pred. No. 0.003;		
Matches	40;	Conservative 15;	Mismatches 43;	Indels 32; Gaps 9;
Qy	16	KAFVGRSRVVDLNLLEEYRLVTSCTPRNFSVI--REELARTDIP--WPGCLLVKRCG	72	
Db	82	KRSVPSRKRSV-----EEAVPAICKTRTVIYIPRSQIDPTSANFLWPPCPEVKKRCT	135	
Qy	73	GNACCLHNCNCCQPSKVTKYH-----EVLQLRPKTGVGRGLHKS LTDVALEHHE	124	
Db	136	G---CC--NTSSVKCQPSRI---HHRSVKVAKYEVRRKKP-----LKEVL--VRLEEHL	180	
Qy	125	EDCDVCVCGST	134	
Db	181	ECTCTANSNS	190	

RESULT 8  
TVCRTSS  
platelet-derived growth factor chain B precursor - cat  
N:Alternate names: PDGF-related transforming protein  
C:Species: Fells silvestris ratus (domestic cat)  
C:Date: 30-Jun-1989 #sequence\_revision 30-Jun-1989 #text\_change 31-Mar-1996  
C:Accession: A26402  
R:Van den Ouweland, A.M.W.; Van Groningen, J.J.M.; Schalken, J.A.; Van Neck, H.W.; Bloembergen, P.  
Nucleic Acids Res. 15, 959-970, 1987  
A:Title: Genetic organization of the c-sis transcription unit.

A:Reference number: A26402; MUID:87146463  
A:Accession: A26402  
A:Molecule type: mRNA  
A:Residues: 1-245 <VAN>  
C:Genetics:  
A:Gene: sis  
C:Superfamily: platelet-derived growth factor  
C:Keywords: glycoprotein; growth factor; platelet; proto-oncogene; transforming protein  
F:1-20/Domain: signal sequence #status predicted <SIG>  
F:21-81/Domain: propeptide #status predicted <PRO>  
F:82-194/Product: platelet-derived growth factor chain B #status predicted <MAT>  
F:163-167/Region: receptor binding #status predicted  
F:63/Binding site: carbohydrate (Asn) (covalent) #status predicted

[illegible]

RESULT 9  
A41551  
vascular endothelial growth factor 206 precursor - human  
N:Alternate names: vascular permeability factor  
N:Contains: vascular endothelial growth factor 121 (VEGF 121); VEGF 165; VEGF 189; VEGF  
C:Species: Homo sapiens (man)  
C:Date: 28-Aug-1992 #sequence\_revision 28-Aug-1992 #text\_change 05-Nov-1999  
C:Accession: A41551; C41551; B41551; A40454; B40454; C40454; A40079; A40080; JQ1463; JQ1464  
R:Houck, K.A.; Ferrara, N.; Winer, J.; Cachianes, G.; Li, B.; Leung, D.W.

Mol. Endocrinol. 5, 1806-1814, 1991  
A:Title: The vascular endothelial growth factor family: identification of a fourth member  
A:Reference number: A41551; PMID:92168017  
A:Accession: A41551  
A:Molecule type: mRNA  
A:Residues: 1-232 <HOU1>  
A:Cross-references: GB:S85192; NID:g246155; PID:g246156  
A:Accession: C41551  
A>Status: nucleic acid sequence not shown  
A:Molecule type: mRNA  
A:Residues: 1-140,'N',183-232 <HOU2>  
A:Accession: B41551  
A>Status: nucleic acid sequence not shown; not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-141,227-232 <HOU>  
R:Tischer, E.; Mitchell, R.; Hartman, T.; Silva, M.; Gospodarowicz, D.; Fiddes, J.C.; J. Biol. Chem. 266, 11947-11954, 1991  
A:Title: The human gene for vascular endothelial growth factor. Multiple protein forms  
A:Reference number: A40454; PMID:91268072  
A:Accession: A40454

A:Residues: 1-165,183-232 <TII>  
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63976;  
A:Accession: B40454  
A:Molecule type: DNA  
A:Residues: 1-140,'N',183-232 <T12>  
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63977;  
A:Accession: C40454  
A:Molecule type: DNA  
A:Residues: 1-141,227-232 <T13>  
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63978  
R:Kleck, P.J.; Hauser, S.D.; Krivi, G.; Sanzo, K.; Warren, T.; Feder, J.; Connolly, D.  
Science 246, 1309-1312, 1989  
A:Title: Vascular permeability factor, an endothelial cell mitogen related to PDGF.  
A:Reference number: A40079; MUID:90069609  
A:Accession: A40079  
A:Status: not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-165,183-232 <KEC>  
A:Cross-references: GB:M27281; NID:g340300; PIDN:AAA36807.1; PID:g340301  
R:Leung, D.W.; Cachianes, G.; Kuang, W.J.; Goeddel, D.V.; Ferrara, N.  
Science 246, 1306-1309, 1989  
A:Title: Vascular endothelial growth factor is a secreted angiogenic mitogen.  
A:Reference number: A40080; MUID:90069608  
A:Accession: A40080  
A:Status: not compared with conceptual translation

A:Molecule type: mRNA  
A:Residues: 1-140, 'N', 183-232 <LEU>  
A:Cross-references: GB:M32977; NID:g181970; PIDN:AAA35789.1; PID:g181971  
E:Weindel, K.; Marne, D.; Welch, H.A.  
Biochem. Biophys. Res. Commun. 183, 1167-1174, 1992  
A:Title: AIDS-associated Kaposi's sarcoma cells in culture express vascular endothelial growth factor  
A:Reference number: JQ1463; MUID:92231879  
A:Accession: JQ1463  
A:Molecule type: mRNA  
A:Residues: 1-140, 'N', 183-232 <WEI>  
A:Cross-references: EMBL:X62568; NID:g37658; PIDN:CAA44447.1; PID:g37659  
A:Experimental source: AIDS-Kaposi's sarcoma cell  
A:Accession: JQ1464  
A:Molecule type: mRNA  
A:Residues: 1-140, 'N', 227-232 <WE2>  
A:Experimental source: AIDS-Kaposi's sarcoma cell  
R:Connolly, D.T.; Olander, J.V.; Heuvelman, D.; Neilson, R.; Monsell, R.; Siegel, N.; J. Biol. Chem. 264, 20017-20024, 1989  
A:Title: Human vascular permeability factor. Isolation from U937 cells.  
A:Reference number: A34492; MUID:90062112  
A:Accession: A34492  
A:Molecule type: protein  
A:Residues: 27-36; 43-49, 'R', 72-76, 'Q', 78-81; 59-71 <CON>  
C:Comment: The most common of several alternatively spliced forms is VEGF 165.  
C:Genetics:  
A:Gene: GDB:VEGF  
A:Cross-references: GDB:I32244; OMIM:192240



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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,105
; FILING DATE: HEREWITH
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/207,550
; FILING DATE: 8-MAR-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/465,968
; FILING DATE: 06-JUN-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: TO BE ASSIGNED
; FILING DATE: 24-DEC-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: ERIC K. STEFFE
; REGISTRATION NUMBER: 36,688
; REFERENCE/DOCKET NUMBER: 1488.1000003/EKS
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)371-2600
; TELEFAX: (202)371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
; US-09-042-105-6

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWQLLGKAFVGRKSRVVDLNLTT--EEVRLYSTPRN--FSVSIREELKRT 57
Db 72 ELESAR-----GRRS-----LGSUTIAEPAMIAECKTRTEVEFIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCNECQVPSKVTKKYHEVLQLRP-----KTGV--- 108
Db 115 NANFLVWPPCPEVQRCSG---CC--NNRVQCRPTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHKSLLTDVALEHHECDC 128
Db 162 KPIFKKAT-VTLEDHLACKC 180

RESULT 14
US-08-867-352-4
; Sequence 4, Application US/08867352
; Patent No. 6060273
; GENERAL INFORMATION:
; APPLICANT: Multicistronic expression units and their use
; TITLE OF INVENTION: Multicistronic expression units and their use
; NUMBER OF SEQUENCES: 25
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,352
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/387,847
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; FILING DATE:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-867-352-4

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWQLLGKAFVGRKSRVVDLNLTT--EEVRLYSTPRN--FSVSIREELKRT 57
Db 72 ELESAR-----GRRS-----LGSUTIAEPAMIAECKTRTEVEFIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCNECQVPSKVTKKYHEVLQLRP-----KTGV--- 108
Db 115 NANFLVWPPCPEVQRCSG---CC--NNRVQCRPTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHKSLLTDVALEHHECDC 128
Db 162 KPIFKKAT-VTLEDHLACKC 180

RESULT 15
US-09-340-250-29
; Sequence 29, Application US/09340250
; Patent No. 6083723
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/340,250
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/989,251
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 29:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-340-250-29

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
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Query Match          14.6%; Score 110; DB 6; Length 220;
Best Local Similarity 32.9%; Pred. No. 0.00015;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
   :||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 51 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 93

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 94 NANFLVMPPCVEVQRCSG---CC--NNRNVCQRPQTQV-----QLRPVQVRKIEIVRK 140

QY 109 RGLHSLTDVALEHHECDC 128
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 141 KPFFKAT-VTLEDHLACKC 159

RESULT 8
US-08-387-845-4
; Sequence 4, Application US/08387845
; Patent No. 5665567
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: Preparation of heterodimeric PDGF-AB using a
; TITLE OF INVENTION: bicistronic vector system in mammalian cells
; NUMBER OF SEQUENCES: 16
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/387,845
; FILING DATE:
; CLASSIFICATION: 435
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-387-845-4

Query Match          14.6%; Score 110; DB 1; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
   :||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 72 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 115 NANFLVMPPCVEVQRCSG---CC--NNRNVCQRPQTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHSLTDVALEHHECDC 128
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 162 KPFFKAT-VTLEDHLACKC 180

RESULT 9
US-08-999-811-6
; Sequence 6, Application US/08999811
; Patent No. 5932540
; GENERAL INFORMATION:
; APPLICANT: HU, JING-SHAN
; APPLICANT: ROSEN, CRAIG A.
; APPLICANT: CAO, LIANG
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2
; NUMBER OF SEQUENCES: 15
; CORRESPONDENCE ADDRESS:
```

```
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX
; STREET: 1100 NEW YORK AVENUE
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/999,811
; FILING DATE: HERewith
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/207,550
; FILING DATE: 8-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/465,968
; FILING DATE: 06-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: MARKOWICZ, KAREN R.
; REGISTRATION NUMBER: 36,351
; REFERENCE/DOCKET NUMBER: 1488.1000004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)371-2600
; TELEFAX: (202)371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
US-08-999-811-6

Query Match          14.6%; Score 110; DB 2; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
   :||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 72 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 115 NANFLVMPPCVEVQRCSG---CC--NNRNVCQRPQTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHSLTDVALEHHECDC 128
   : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 162 KPFFKAT-VTLEDHLACKC 180

RESULT 10
US-08-778-275-4
; Sequence 4, Application US/08778275
; Patent No. 5935819
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: Preparation of heterodimeric PDGF-AB using a
; TITLE OF INVENTION: bicistronic vector system in mammalian cells
; NUMBER OF SEQUENCES: 16
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,275
; FILING DATE:
; CLASSIFICATION:
```



RT \*Molecular cloning of a novel vascular endothelial growth factor,

VEGF-D.  
 RL Genomics 42:483-488(1997).  
 DR EMBL; X9572; CAA67892.1; .  
 DR EMBL; D89628; BAA14002.1; .  
 DR HSSP; P15692; LVPP.  
 DR MGD; MG1:108037; Figf.  
 DR InterPro; IPR000072; PDGF.  
 DR Pfam; PF00341; PDGF; 1.  
 DR ProDom; PD001629; PDGF; 1.  
 DR SMART; SM00141; PDGF; 1.  
 DR PROSITE; PS00249; PDGF\_1; 1.  
 DR PROSITE; PS50278; PDGF\_2; 1.  
 SQ SEQUENCE 358 AA; 40908 MW; 6636B17FBF07037C CRC64;

Query Match 15.8%; Score 119.5; DB 11; Length 358;  
 Best Local Similarity 33.3%; Pred. No. 4.1e-05;  
 Matches 36; Conservative 15; Mismatches 42; Indels 15; Gaps 6;  
 QY 29 LNLITEVRLYSCTPRNFVSIREEL-KRTDTIFWPQCLLVKRCGNCACCLHNCNECQC 87  
 DB 104 LKVIDEWMQTCSPRETCEVASELGKTTTFKPCVNVFRCGG---CC--NEEGVMC 158  
 QY 88 V---PSKVKYKXHEVLQRLPKTGVRGLHSLTDVALEHHEECDCVCRG 132  
 DB 159 MNTSTVSKQLPEISV--PLTSV----PELVPVKIANHTGCKLPTG 200

RESULT 14

ID O42571 PRELIMINARY; PRT; 148 AA.  
 AC O42571;  
 DT 01-JAN-1998 (TRENBLrel. 05, Created)  
 DT 01-JAN-1998 (TRENBLrel. 05, Last sequence update)  
 DT 01-JUN-2001 (TRENBLrel. 17, Last annotation update)  
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR 122.  
 GN VEGF.  
 OS Xenopus laevis (African clawed frog).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;  
 OC Xenopodinae; Xenopus.  
 OX NCBI\_TaxID=8355;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.;  
 RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.  
 DR EMBL; AF008593; AAB63679.1; .  
 DR HSSP; P15692; LVPP.  
 DR InterPro; IPR000072; PDGF.  
 DR Pfam; PF00341; PDGF; 1.  
 DR ProDom; PD001629; PDGF; 1.  
 DR SMART; SM00141; PDGF; 1.  
 DR PROSITE; PS00249; PDGF\_1; 1.  
 DR PROSITE; PS50278; PDGF\_2; 1.  
 SQ SEQUENCE 148 AA; 17234 MW; 4AD153CA2F8B1E95 CRC64;

Query Match 15.5%; Score 117; DB 13; Length 148;  
 Best Local Similarity 26.0%; Pred. No. 3e-05;  
 Matches 34; Conservative 27; Mismatches 46; Indels 24; Gaps 7;

QY 6 LYRPTWQLLGKAFVFG-----RKSRRVVDNLNLTVEVRLYS---CTPRNFVSIREEL-KRT 57  
 DB 16 LYIPHAQLSGAAPMPGEGDHKPTVVKF-----LKVYERSMCQVREILVDIFQEPDEV 69  
 QY 58 DTIFWPQCLLVKRCGNCACCLHNCNECQVPSKVKYKXHEVLQRLPKTGVRGLHSLTD 117  
 DB 70 EYIFKPCVPLMRCAG---CC--NDESLECVPTCYNITMQIMKIRPH-----ISQIMD 119  
 QY 118 VALEHHEECDC 128  
 DB 120 MSFQOHSQCEC 130

RESULT 15

ID O42572 PRELIMINARY; PRT; 194 AA.  
 AC O42572;  
 DT 01-JAN-1998 (TRENBLrel. 05, Created)  
 DT 01-JAN-1998 (TRENBLrel. 05, Last sequence update)  
 DT 01-JUN-2001 (TRENBLrel. 17, Last annotation update)  
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR 196.  
 GN VEGF.  
 OS Xenopus laevis (African clawed frog).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;  
 OC Xenopodinae; Xenopus.  
 OX NCBI\_TaxID=8355;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.;  
 RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.  
 DR EMBL; AF008594; AAB63680.1; .  
 DR HSSP; P15692; LVGH.  
 DR InterPro; IPR000072; PDGF.  
 DR Pfam; PF00341; PDGF; 1.  
 DR ProDom; PD001629; PDGF; 1.  
 DR SMART; SM00141; PDGF; 1.  
 DR PROSITE; PS00249; PDGF\_1; 1.  
 DR PROSITE; PS50278; PDGF\_2; 1.  
 SQ SEQUENCE 194 AA; 22672 MW; 85D7BEC7CEFEF17E CRC64;

Query Match 15.5%; Score 117; DB 13; Length 194;  
 Best Local Similarity 26.0%; Pred. No. 4e-05;  
 Matches 34; Conservative 27; Mismatches 46; Indels 24; Gaps 7;  
 QY 6 LYRPTWQLLGKAFVFG-----RKSRRVVDNLNLTVEVRLYS---CTPRNFVSIREEL-KRT 57  
 DB 16 LYIPHAQLSGAAPMPGEGDHKPTVVKF-----LKVYERSMCQVREILVDIFQEPDEV 69  
 QY 58 DTIFWPQCLLVKRCGNCACCLHNCNECQVPSKVKYKXHEVLQRLPKTGVRGLHSLTD 117  
 DB 70 EYIFKPCVPLMRCAG---CC--NDESLECVPTCYNITMQIMKIRPH-----ISQIMD 119  
 QY 118 VALEHHEECDC 128  
 DB 120 MSFQOHSQCEC 130

Search completed: March 18, 2002, 10:32:10  
 Job time: 196 sec

Query Match	46.0%	Score 346.5	DB 11	Length 370
Best Local Similarity	50.0%	Pred. No. 3.7e-30		
Matches	66	Conservative 23	Mismatches 38	Indels 5
QY	2	DLEDYRPTWLLGKAFVGRKSRVVDLLNLTEEVRLYSCPRNFSYSIREELKRTDTIF	61	
Db	235	DLENLYMDTPRYGRSY-HERSK-VDLORLNDVVKRYSCPRNHSVNLREELKUTNAVF	292	
QY	62	WPGCLLVKRCGGCACLLHCNCEQCPVSKVTKKYHEVLQLR--KTGVRGLHKSLLTDV	118	
Db	293	FPRCLLVQRCGGCGGLTNWKSCTCSSGKTYYKHYEVLKFPFGHFKRGKAKNALVDI	352	
QY	119	ALEHHEECDCVC	130	
Db	353	QLDHERCDCIC	364	
RESULT	8			
ID	Q9D1L8	PRELIMINARY;	PRT;	290 AA.
AC	Q9D1L8;			
DT	01-JUN-2001 (TrEMBLrel. 17, Created)			
DT	01-JUN-2001 (TrEMBLrel. 17, Last sequence update)			
DE	01-JUN-2001 (TrEMBLrel. 17, Last annotation update)			
DE	1110003109RIK PROTEIN.			
GN	1110003109RIK.			
OS	Mus musculus (Mouse).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
NCBI_TaxID	10090;			
LN	[1]			
RP	SEQUENCE FROM N. A.			
RC	STRAN=C57BL/6J; TISSUE=EMBRYO;			
RX	MEDLINE=21085660; PubMed=11217851;			
RA	Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,			
RA	Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,			
RA	Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,			
RA	Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,			
RA	Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,			
RA	Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,			
RA	Kuehl P., Lewis S., Matsuo Y., Nikaide I., Pesole G., Quackenbush J.,			
RA	Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,			
RA	Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,			
RA	Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,			
RA	Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,			
RA	Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,			
RA	Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,			
RA	Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,			
RA	Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-P.,			
RA	Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,			
RA	Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohsaki S.,			
RA	Hayashizaki Y.			
RT	"Functional annotation of a full-length mouse cDNA collection."			
RL	Nature 409:685-690(2001).			
RL	EMBL; AK003359; BAB22735.1; -			
DR	MGI; MGI:1919035; 1110003109RIK.			
DR	InterPro; IPR000859; CUB.			
DR	InterPro; IPR000072; PDGF.			
DR	Pfam; PF00431; CUB; 1.			
DR	SMART; SM00042; CUB; 1.			
DR	SMART; SM00141; PDGF; 1.			
DR	PROSITE; PS01180; CUB; 1.			
DR	PROSITE; PS02078; PDGF_2; 1.			
SQ	SEQUENCE 290 AA; 33425 MW; 14214509E6717D4A CRC64;			

Query Match	45.8%	Score 345.5;	DB 11;	Length 290;
Best Local Similarity	50.0%;	Pred. No. 3.7e-30;		
Matches	66;	Conservative 22;	Mismatches 39;	Indels 5; Gaps 3;
QY	2	DLEDYRPTWQLGKGFVQFKRGRVVDNLNLTTEVRLYSCTPRNFYSIRBEELKRTDTIF	61	
Db	155	DLENLYLDTPHYGRSY-HDRKSK-VDLDRINDLVKRYSCCTPRNHSYRLNEELKLTWAF	212	

QY 62 WPGCLLYKRCGGNCACCLHNCNEQCVPSPKVTKKYHEVLQLRP---KTGVRGLHLKLTDV 118  
 :| | | | :| | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 213 FPRCLLVQRCCGCCGTGVNWKSCCTSSSGTAVKKYHYEVLFEPGHFKRRSKAKNMALVDI 372

QY 119 ALEHHEDCDVC 130  
 |: ||||| |||:  
Db 273 QLDHHERCDCIC 284

RESULT 9

QBWBW5 PRELIMINARY; PRT; 364 AA.

AC QBWBW5;

DT 01-JUN-2001 (TEMBLrel. 17, Created)

DT 01-JUN-2001 (TEMBLrel. 17, Last sequence update)

DT 01-JUN-2001 (TEMBLrel. 17, Last annotation update)

DE IRIS-EXPRESSED GROWTH FACTOR SHORT FORM.

GN IEGF.

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

OX NCBI\_TaxID=9606;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=IRIS;

RA Wistow G.;

RT "Iris-expressed Growth Factor (IEGF).";

RL Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.  
DR EMBL; AY027518; AAA20082.1; -.

SQ SEQUENCE 364 AA; 42166 MW; 245C53B8DDEA9EAC CRC64;

Query Match 45.7% ; Score 344.5; DB 4; Length 364;

Best Local Similarity 50.0% ; Pred.No. 6.le-30;

Matches 66; Conservative 21; Mismatches 40; Indels 5; Gaps

QY 2 DLEDLRPTOLLCKAFVGGRKSRVVDLLLTETEVRLYSCTPNFSVSITREELKRDTDIF 61  
 :| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 229 DLNNYLDPYRGRSV-HDKRSK-VDLDELNDLNDAKRYSTCPNYSVNTREELKANVF 286

QY 62 WPGCLLYKRCGGNCACCLHNCNEQCVPSPKVTKKYHEVLQLRP---KTGVRGLHLKLTDV 118  
 :| | | | :| | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 287 FPRCLLVQRCCGCCGTGVNWRSCTCNSGTVKKYHEVLQFEGPHIKRKRGAKTMALVDI 346

QY 119 ALEHHEDCDVC 130  
 |: ||||| |||:  
Db 347 QLDHHERCDCIC 358

RESULT 10

QGZP0 PRELIMINARY; PRT; 370 AA.

AC QGZP0;

DT 01-MAR-2001 (TEMBLrel. 16, Created)

DT 01-MAR-2001 (TEMBLrel. 16, Last sequence update)

DT 01-JUN-2001 (TEMBLrel. 17, Last annotation update)

DE SPINAL CORD-DERIVED GROWTH FACTOR-B (MSTP036) (IRIS-EXPRESSED GROWTH  
FACTOR LONG FORM).

GN HSCDFG-F OR IEFG.

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

OX NCBI\_TaxID=9606;

RN [1]

RP SEQUENCE FROM N.A.

RC Hamada T., Ui-Tai K., Imaki J.-, Miyata Y.;

RT "Molecular Cloning of SCDFG-B, a Novel Growth Factor Homologous to  
SCDFG/PDGFR-C/fallotenein.";

RL Biochem. Biophys. Res. Commun. 0:0-0(2000).

RN [2]

RP SEQUENCE FROM N.A.

RC TISSUE=AORTA;

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Query Match          100.0%; Score 754; DB 4; Length 345;
Best Local Similarity 100.0%; Pred. No. 3.7e-75;
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 60
   |||||
Db 210 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 269
   |||||

QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
   |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
   |||||

QY 121 EHHEDCDVCRGSGTG 136
   |||||
Db 330 EHHEDCDVCRGSGTG 345
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RESULT 2
Q9NR1 PRELIMINARY; PRT; 345 AA.
ID Q9NR1
AC Q9NR1;
DT 01-OCT-2000 (Tremblrel. 15, Created)
DT 01-OCT-2000 (Tremblrel. 15, Last sequence update)
DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR C.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Uutela M.,
RA Backstrom G., Hellstrom M., Bostrom H., Li H., Soriano P.,
RA Betscholtz C., Heldin C.-H., Alitalo K., Ostman A., Eriksson U.;
RT "PDGF-C is a novel protease-activated ligand for the PDGF alpha
   receptor.";
RL Nat. Cell Biol. 0:0-0(2000).
DR EMBL; AF244813; AAF80597.1; -.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam: PF00431; CUB; 1.
DR SMART; SM00042; PDGF; 1.
DR SMART; SM00042; CUB; 1.
DR PROSITE; PS01180; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 39043 MW; 590889CEA55CC5EA CRC64;

Query Match          100.0%; Score 754; DB 4; Length 345;
Best Local Similarity 100.0%; Pred. No. 3.7e-75;
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 60
   |||||
Db 210 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 269
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QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
   |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
   |||||

QY 121 EHHEDCDVCRGSGTG 136
   |||||
Db 330 EHHEDCDVCRGSGTG 345
   |||||

RESULT 3
Q9Q71 PRELIMINARY; PRT; 345 AA.
ID Q9Q71
AC Q9Q71;
DT 01-MAY-2000 (Tremblrel. 13, Created)
DT 01-MAY-2000 (Tremblrel. 13, Last sequence update)

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DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
DE FALLOFEIN.
GN PDGFC.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=OVARY;
RA Tsai Y.-J., Lee R.K.-K., Chen Y.-H., Lin S.-P., Cheng W.T.-K.;
RT "CDNA cloning of follotein from mouse ovary";
RL Submitted (JAN-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF117608; AAF22516.1; -.
DR MGD; MGI:1859631; Pdgc.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam; PF00431; CUB; 1.
DR SMART; SM00042; CUB; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 38741 MW; 3A58A1F701B84EA2 CRC64;

Query Match          92.4%; Score 697; DB 11; Length 345;
Best Local Similarity 89.0%; Pred. No. 7.3e-69;
Matches 121; Conservative 11; Mismatches 4; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 60
   :||: |||||
Db 210 VDLDSLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLYLSCTPRNFSVSIREELKRTDTI 269
   :||: |||||

QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
   |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
   |||||

QY 121 EHHEDCDVCRGSGTG 136
   |||||
Db 330 EHHEDCDVCRGSGTG 345
   |||||

RESULT 4
Q9JH8 PRELIMINARY; PRT; 345 AA.
ID Q9JH8
AC Q9JH8;
DT 01-OCT-2000 (Tremblrel. 15, Created)
DT 01-OCT-2000 (Tremblrel. 15, Last sequence update)
DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR C.
GN PDGFC.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=SWISS-WEBSTER/NIH;
RA Ding H., Wu X., Kim I., Tam P.P.L., Koh G.Y., Nagy A.;
RT "The mouse Pdgc gene: Dynamic expression in embryonic tissues during
   organogenesis.";
RL Mech. Dev. 0:0-0(2000).
DR EMBL; AF286725; AAF91483.1; -.
DR MGD; MGI:1859631; Pdgc.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam; PF00431; CUB; 1.
DR SMART; SM00042; CUB; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 38886 MW; FA1486BED6D362F8 CRC64;

```



GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.  
OM protein - protein search, using sw model  
Run on: March 18, 2002, 10:19:33 ; Search time 23.75 Seconds  
(without alignments)  
424.167 Million cell updates/sec

Title: US-09-706-968-2\_COPY\_210\_345  
Perfect score: 754  
Sequence: 1 LDLEDLYRPTWOLGKAFV.....DVALEHHBCDCVCRGSGG 136

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5  
Searched: 522463.seqs, 74073290 residues  
Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : A.Geneseq\_1101.\*  
1: /SID88/gcgdata/geneseq/geneseq/AA1980.DAT.\*  
2: /SID88/gcgdata/geneseq/geneseq/AA1981.DAT.\*  
3: /SID88/gcgdata/geneseq/geneseq/AA1982.DAT.\*  
4: /SID88/gcgdata/geneseq/geneseq/AA1983.DAT.\*  
5: /SID88/gcgdata/geneseq/geneseq/AA1984.DAT.\*  
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8: /SID88/gcgdata/geneseq/geneseq/AA1987.DAT.\*  
9: /SID88/gcgdata/geneseq/geneseq/AA1988.DAT.\*  
10: /SID88/gcgdata/geneseq/geneseq/AA1989.DAT.\*  
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14: /SID88/gcgdata/geneseq/geneseq/AA1993.DAT.\*  
15: /SID88/gcgdata/geneseq/geneseq/AA1994.DAT.\*  
16: /SID88/gcgdata/geneseq/geneseq/AA1995.DAT.\*  
17: /SID88/gcgdata/geneseq/geneseq/AA1996.DAT.\*  
18: /SID88/gcgdata/geneseq/geneseq/AA1997.DAT.\*  
19: /SID88/gcgdata/geneseq/geneseq/AA1998.DAT.\*  
20: /SID88/gcgdata/geneseq/geneseq/AA1999.DAT.\*  
21: /SID88/gcgdata/geneseq/geneseq/AA2000.DAT.\*  
22: /SID88/gcgdata/geneseq/geneseq/AA2001.DAT.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	ID	Description
1	754	100.0	318	21	AA1984558
2	754	100.0	339	21	AA1984338
3	754	100.0	345	20	AA1933679
4	754	100.0	345	20	AA1941766
5	754	100.0	345	20	AA1930023
6	754	100.0	345	21	AA198657
7	754	100.0	345	21	AA1982450
8	754	100.0	345	21	AA1943322
9	754	100.0	345	21	AA198633
10	754	100.0	345	21	AA198634
11	754	100.0	345	21	AA198635

12	754	100.0	345	21	AA198636	Human VEGF-X prote
13	754	100.0	345	21	AA198640	Human VEGF-X prote
14	754	100.0	345	21	AA198650	Human 990126veg p
15	754	100.0	345	21	AA198651	Human VEGF-X prote
16	754	100.0	345	21	AA198578	Human PRO200 (vasc
17	754	100.0	345	21	AA1983414	Human PRO200 prote
18	754	100.0	345	21	AA19824412	Human PRO713 prote
19	754	100.0	345	21	AA19801419	Human TANGO 128.
20	754	100.0	345	21	AA19803003	Human growth facto
21	754	100.0	345	21	AA198658	Human growth facto
22	754	100.0	345	21	AA1984557	Amino acid sequenc
23	754	100.0	345	21	AA198285	Bone morphogenic p
24	754	100.0	345	22	AA19812314	Human PRO200 poly
25	754	100.0	345	22	AA19874028	Human VEGF/PDGF-li
26	754	100.0	345	22	AA19802649	Human LP8, a PDGF-
27	754	100.0	345	22	AA19800997	Human zveg3 prote
28	754	100.0	345	22	AA1980980	Human PRO200 prote
29	754	100.0	345	22	AA19849895	Human PRO200 prote
30	754	100.0	345	22	AA19853074	Human angiogenesis
31	754	100.0	374	21	AA1980639	Human VEGF-X prote
32	744	98.7	354	21	AA1980640	Human VEGF-X prote
33	744	98.7	354	21	AA1980641	Human VEGF-X prote
34	697	92.4	345	21	AA198658	Mouse zveg3, SEQ
35	697	92.4	345	21	AA198661	Murine vascular en
36	697	92.4	345	21	AA1984559	A murine platelet-
37	697	92.4	345	22	AA19800998	Mouse zveg3 prote
38	662	87.8	121	22	AA19874034	Synthetic protein
39	662	87.8	123	22	AA19874033	Human VEGF-X PDGF-
40	646	85.7	149	21	AA1980642	Human VEGF-X prote
41	607	80.5	113	21	AA1980631	Human VEGF-X prote
42	607	80.5	113	21	AA1980632	Human VEGF-X prote
43	590.5	78.3	227	21	AA1980637	Human VEGF-X prote
44	590.5	78.3	227	21	AA1980638	Human VEGF-X prote
45	346.5	46.0	282	21	AA1980653	Human VEGF-X prote

ALIGNMENTS

RESULT 1  
AA1984558  
ID AA1984558 standard; Protein; 318 AA.  
XX  
AC AA1984558;  
XX  
DT 25-JUL-2000 (first entry)  
XX  
DE A fragment of platelet-derived growth factor C (PDGF-C).  
XX  
KW Platelet-derived growth factor C; PDGF-C; cell proliferation;  
KW growth factor; heparin; connective tissue; wound healing; VEGF-F;  
KW fibroblast mitogenesis; PDGF alpha receptor activation; tumour growth;  
KW choriocarcinoma; Wilms tumour; megakaryoblastic leukaemia;  
KW lung carcinoma; erythroleukemia; tissue remodelling.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Misc-difference 287 /note= "encoded by AAS"  
XX  
XX WO200018212-A2.  
XX  
PD 06-APR-2000.  
XX  
PF 30-SEP-1999; 99WO-US22668.  
XX  
PR 30-SEP-1998; 98US-0102461.  
PR 12-NOV-1998; 98US-0108109.  
PR 03-DEC-1998; 98US-0110749.  
PR 18-DEC-1998; 98US-0113002.  
PR 21-MAY-1999; 99US-0135426.  
PR 15-JUL-1999; 99US-0144022.

KW VEGF-E; human; vascular endothelial cell growth factor; wound repair;  
 KW treatment; cardiovascular disorder; endothelial disorder; therapy;  
 KW tissue generation; regeneration; cardiac hypertrophy; cancer; detection;  
 KW angiogenic disorder; age-related macular degeneration; vascular disease;  
 KW neovascularization; tumor; gene mapping.

XX Homo sapiens.

OS WO9947677-A2.

PN 23-SEP-1999.

PD 10-MAR-1999; 99WO-US05190.

PF 17-MAR-1998; 98US-0040220.

PR 02-NOV-1998; 98US-0184216.

XX (GETH ) GENENTECH INC.

XX Ferrara N, Kuo SS;

XX WPI; 1999-580306/49.

DR N-PSDB; AAZ23691.

XX New growth factor polypeptide useful for treating cardiovascular or  
 PT endothelial disorders, e.g. cardiac hypertrophy -

XX Claim 1; Fig 2; 122pp; English.

XX This invention describes the isolation of a novel human vascular  
 CC endothelial cell growth factor-E (VEGF-E) polypeptide which has  
 CC tranquillizer, vulnery and cardiant activity. VEGF-E can be administered  
 CC therapeutically, especially by expressing encoding polynucleotides, to  
 CC treat cardiovascular or endothelial disorders in mammals, especially  
 CC humans. It is useful in wound repair and tissue generation and  
 CC regeneration, and may especially be used to treat cardiac hypertrophy  
 CC It can be combined with a carrier in pharmaceutical compositions, which  
 CC can be administered to treat disorders as above. VEGF-E can be used to  
 CC screen for antagonists and agonists, and the antagonists administered to  
 CC treat angiogenic disorders in mammals (especially humans) e.g. cancer or  
 CC age-related macular degeneration. It can be used to generate antibodies,  
 CC useful therapeutically as antagonists, as above. The antibodies are also  
 CC useful to detect VEGF-E polypeptide, especially to diagnose  
 CC cardiovascular, endothelial or angiogenic disorders in mammals (e.g.  
 CC by contacting the antibody with a tissue sample and detecting formation  
 CC of an antibody-VEGF-E polypeptide complex. Polynucleotides encoding  
 CC VEGF-E can be used to diagnose cardiovascular and endothelial disorders  
 CC in mammals, by detecting abnormally high or low VEGF-E gene expression in  
 CC tissue samples. They can also be used to diagnose a disease or  
 CC susceptibility to a disease related to a mutated form of VEGF-E (e.g. a  
 CC cardiovascular, endothelial or angiogenic disorder such as a tumor), by  
 CC detecting a mutation in the VEGF-E-encoding sequence isolated from a  
 CC sample. They may also be used to produce probes useful to detect related  
 CC sequences or for gene mapping. This sequence represents the human VEGF-E  
 CC protein described in the method of the invention.

XX Sequence 345 AA;

Query Match 100.0%; Score 754; DB 20; Length 345;  
 Best Local Similarity 100.0%; Pred. No. 6e-71;  
 Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 LDLEDLYRPTWQLGKAFVFGKRSVVDNLNLTTEVRLYSCTPRNFVSIREELKRTDTI 60

Db 210 ldledlyrptwqlgkafvfgkrsvvdnlnteervlyscptrnfvsireelkrtkti 269

Oy 61 FWPGLLVKRCGGNACCLHNCNECQVPSKVTKKYHEVLQRLPKTVGRGLHKSITDVAL 120

Db 270 fwpgccllvkrccgnacclhncncqcvpskvtkkylqlrpktdvgrglhksitdval 329

Oy 121 EHHEECDCVCRGSGTG 136

Db 330 ehheecdvcrgstgg 345  
 RESULT 4  
 AAY41766  
 ID AAY41766 standard; Protein; 345 AA.  
 XX  
 AC AAY41766;  
 XX  
 DT 07-DEC-1999 (first entry)  
 XX  
 DE Human PRO200 protein sequence.  
 XX  
 KW Human; PRO; EST: expressed sequence tag; PCR primer; hybridisation;  
 KW probe; blood coagulation disorder; cancer; cellular adhesion disorder;  
 KW secreted protein; transmembrane protein.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO9946281-A2.  
 XX  
 PD 16-SEP-1999.  
 XX  
 PF 08-MAR-1999; 99WO-US05028.  
 XX  
 PR 10-MAR-1998; 98US-0077450.  
 PR 11-MAR-1998; 98US-0077632.  
 PR 11-MAR-1998; 98US-0077641.  
 PR 11-MAR-1998; 98US-0077649.  
 PR 12-MAR-1998; 98US-0077791.  
 PR 13-MAR-1998; 98US-0078004.  
 PR 17-MAR-1998; 98US-0040220.  
 PR 20-MAR-1998; 98US-0078886.  
 PR 20-MAR-1998; 98US-0078910.  
 PR 20-MAR-1998; 98US-0078936.  
 PR 20-MAR-1998; 98US-0078939.  
 PR 25-MAR-1998; 98US-0079294.  
 PR 26-MAR-1998; 98US-0079656.  
 PR 27-MAR-1998; 98US-0079663.  
 PR 27-MAR-1998; 98US-0079664.  
 PR 27-MAR-1998; 98US-0079689.  
 PR 27-MAR-1998; 98US-0079728.  
 PR 27-MAR-1998; 98US-0079786.  
 PR 30-MAR-1998; 98US-0079920.  
 PR 30-MAR-1998; 98US-0079923.  
 PR 31-MAR-1998; 98US-0080105.  
 PR 31-MAR-1998; 98US-0080107.  
 PR 31-MAR-1998; 98US-0080165.  
 PR 31-MAR-1998; 98US-0080194.  
 PR 01-APR-1998; 98US-0080327.  
 PR 01-APR-1998; 98US-0080328.  
 PR 01-APR-1998; 98US-0080333.  
 PR 01-APR-1998; 98US-0080334.  
 PR 08-APR-1998; 98US-0081049.  
 PR 08-APR-1998; 98US-0081070.  
 PR 08-APR-1998; 98US-0081071.  
 PR 09-APR-1998; 98US-0081195.  
 PR 09-APR-1998; 98US-0081203.  
 PR 09-APR-1998; 98US-0081229.  
 PR 15-APR-1998; 98US-0081817.  
 PR 15-APR-1998; 98US-0081838.  
 PR 15-APR-1998; 98US-0081952.  
 PR 21-APR-1998; 98US-0082568.  
 PR 21-APR-1998; 98US-0082569.  
 PR 22-APR-1998; 98US-0082700.  
 PR 22-APR-1998; 98US-0082704.  
 PR 22-APR-1998; 98US-0082804.  
 PR 23-APR-1998; 98US-0082767.  
 PR 23-APR-1998; 98US-0082796.  
 PR 27-APR-1998; 98US-0083336.  
 PR 28-APR-1998; 98US-0083322.

Db 210 ldledlyrptwllgkafvgrksrvvdnlnteevrrlyscptprnfsvireelkrtdti 269  
QY 61 FWPgcllvkrcgncacclhncneqcqvpskvtkyhevlqlrpkrtgvrghksltdval 120  
Db 270 fwpgcllvkrcgncacclhncneqcqvpskvtkyhevlqlrpkrtgvrghksltdval 329  
QY 121 EHHECDVCVCGSTGG 136  
Db 330 ehhecdvcvrgstgg 345

RESULT 6  
AAB48657  
ID AAB48657 standard; Protein; 345 AA.  
XX AC AAB48657;  
XX 09-MAR-2001 (first entry)  
XX 210 ldledlyrptwllgkafvgrksrvvdnlnteevrrlyscptprnfsvireelkrtdti 269  
DE Human zvegfg3, SEQ ID NO:33.  
XX Human; zvegfg3; zvegfg4 fusion; growth factor homologue; VEGF/PDGF family;  
KW CUB domain; PDGF-like activity; mitogenic; osteogenic;  
KW neovascularisation; tissue repair; proliferation; differentiation;  
KW liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis;  
KW periodontal disease; bone fracture; wound healing; vulnery; ischaemia;  
KW immunomodulation; hepatic.  
XX OS Homo sapiens.  
XX PN WO200066736-A1.  
XX PD 09-NOV-2000.  
XX PF 03-MAY-2000; 2000WO-US40047.  
XX PR 03-MAY-1999; 99US-0304216.  
PR 10-NOV-1999; 99US-0164463.  
PR 04-FEB-2000; 2000US-0180169.  
XX PA (ZYMO ) ZYMOGENETICS INC.  
XX PI Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;  
DR WPI; 2000-687541/67.  
DR N-PSDB; AAC81582.  
XX PT Growth factor homologs and the nucleic acids that encode them, useful  
PT e.g. for treating liver damage, ischemia, multiple sclerosis and  
PT Alzheimer's disease -  
XX PS Claim 48; Page 125-126; 143pp; English.  
XX CC The invention relates to the human growth factor homologue zvegfg4  
CC (AAB48653), and nucleic acids encoding it (AAC81555). Zvegfg4 is a member  
CC of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial  
CC growth factor) family. Zvegfg4 has a growth factor domain (AAB48654)  
CC characterised by a PDGF cysteine knot structure, and a CUB domain  
CC (AAB48655) which has a beta barrel structure. Zvegfg4 has PDGF-like  
CC activity, having mitogenic activity on fibroblasts, vascular smooth  
CC muscle cells and pericytes, and has also been shown to stimulate bone  
CC growth. The invention also relates to fusion proteins comprising human  
CC zvegfg4 or fragments thereof, particularly human zvegfg4/human zvegfg3  
CC fusions; expression constructs and host cells comprising human zvegfg4  
CC nucleic acids; the recombinant expression of human zvegfg4; an antibody  
CC which binds to human zvegfg4 or a fragment thereof; a method of activating  
CC a cell-surface PDGF receptor using a zvegfg4-derived polypeptide; a  
CC method of modulating the proliferation, differentiation, migration or  
CC metabolism of bone cells, comprising exposing bone cells to  
CC zvegfg4-derived polypeptides; and a method of detecting a genetic  
CC abnormality in the zvegfg4 gene of a patient. Zvegfg4 proteins and derived  
CC fragments may be used to stimulate tissue development or repair, or  
CC cellular differentiation or proliferation. They are particularly used for

CC the treatment or repair of liver damage, and may also be used to  
CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or  
CC multiple sclerosis). Due to their osteogenic activity, they may be used  
CC in the treatment of periodontal disease and fractures. They may also be  
CC used to enhance expansion and mobilisation of haematopoietic stem cells  
CC and endothelial precursor stem cells, which may be useful in the  
CC treatment of ischaemia, in wound healing, and in the modulation of the  
CC immune system. The present sequence represents human zvegfg3.  
XX SQ Sequence 345 AA;  
Query Match 100.0%; Score 754; DB 21; Length 345;  
Best Local Similarity 100.0%; Pred. No. 6e-71;  
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLNLTTEEVRRLYSCPTPRNFSVIREELKRDTDI 60  
Db 210 ldledlyrptwllgkafvgrksrvvdnlnteevrrlyscptprnfsvireelkrtdti 269  
QY 61 FWPgcllvkrcgncacclhncneqcqvpskvtkyhevlqlrpkrtgvrghksltdval 120  
Db 270 fwpgcllvkrcgncacclhncneqcqvpskvtkyhevlqlrpkrtgvrghksltdval 329  
QY 121 EHHECDVCVCGSTGG 136  
Db 330 ehhecdvcvrgstgg 345

RESULT 7  
AAB24250  
ID AAB24250 standard; Protein; 345 AA.  
XX AC AAB24250;  
XX 08-FEB-2001 (first entry)  
XX Human platelet-derived growth factor related protein LP8.  
XX Human; platelet derived growth factor related protein; LP8; VEGFh;  
KW vascular endothelial growth factor h; tissue regeneration; vulnery;  
KW atherosclerosis; PDGF-related protein; antiarteriosclerotic.  
XX OS Homo sapiens.  
XX PN WO200059940-A2.  
XX PD 12-OCT-2000.  
XX PF 24-MAR-2000; 2000WO-US06427.  
XX PR 06-APR-1999; 99US-0127913.  
XX PA (ELIL ) LILLY & CO ELI.  
XX PI Hammond LJ, Na S;  
XX WPI; 2000-664991/64.  
DR N-PSDB; AAC64426.  
XX Enhancing tissue growth and promoting wound healing by administering  
PT platelet-derived growth factor related protein, LP8 or its analog and  
PT treating atherosclerosis by administering LP8 antagonist -  
XX PS Claim 4; Page 63-64; 64pp; English.  
XX CC The present invention describes a method for enhancing tissue growth,  
CC promoting wound healing or stimulating smooth muscle growth by  
CC administering a platelet-derived growth factor (PDGF) related protein,  
CC designated LP8 or its analogue. Also described is a method of slowing  
CC the progress of atherosclerosis or treating atherosclerosis comprising  
CC the administration of an LP8 antagonist. The method is useful for  
CC enhancing tissue growth, promoting wound healing and stimulating smooth

XX WPI; 2000-442669/38.  
DR N-PSDB; AAA71951.  
XX  
PT New vascular endothelial growth factor protein, useful for treating or  
PT preventing diseases associated with inappropriate angiogenesis activity  
PT such as cancer, rheumatoid arthritis, psoriasis and wounds -  
XX  
PS Disclosure; Fig 6; 127pp; English.  
XX  
XX This invention describes a novel vascular endothelial growth factor-X  
CC (VEGF-X) protein (Ia) and its encoding polynucleotide (Iia) which has  
CC vulnery, cytostatic, antirheumatic, antiarthritic, antipsoriatic and  
CC antidiabetic activity and acts as an angiogenesis and vascularization  
CC regulator. An antisense molecule of the invention is useful for treating  
CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic  
CC retinopathy by inhibiting angiogenic activity or inappropriate  
CC vascularization including formation and proliferation of new blood  
CC vessels, growth and development of tissues, tissue regeneration and organ  
CC and tissue repair in a subject. The products of the invention are useful  
CC for preparing medicaments for treating wounds such as dermal ulcers,  
CC pressure sores, venous sores, diabetic ulcers and burns and to promote  
CC skin graft growth, tissue repair, proliferation of new blood vessels,  
CC tissue regeneration and organ repair by promoting angiogenic activity or  
CC vascularization. This sequence represents the RACE generated human VEGF-X  
CC protein described in the method of the invention.  
XX  
SQ Sequence 345 AA;  
  
Query Match 100.0%; Score 754; DB 21; Length 345;  
Best Local Similarity 100.0%; Pred. No. 6e-71;  
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLLTEEVRLYSCTPRNFSVSIREELKRTDTI 60  
Db 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscprnfsvsireelkrttdi 269  
  
QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSITDVAL 120  
Db 270 fwpgccllvkrcggncaccclhncnecqvpstkvtkkyhevlqlrpkgtgvrghksitdval 329  
  
QY 121 EHHEECDCVCRGSTGG 136  
Db 330 ehheecdvcrgstgg 345  
  
RESULT 10  
AAB10634  
ID AAB10634 standard; Protein; 345 AA.  
XX  
AC AAB10634;  
XX  
DT 19-JAN-2001 (first entry)  
XX  
DE Human VEGF-X homologue protein.  
XX  
KW VEGF-X; vascular endothelial growth factor; human; vulnery; cytostatic;  
KW antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;  
KW angiogenesis regulator; vascularization regulator; cancer; psoriasis;  
KW rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;  
KW tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;  
KW venous sore; diabetic ulcer; burns; skin graft growth.  
XX  
OS Homo sapiens.  
XX  
PN WO200037641-A2.  
XX  
PD 29-JUN-2000.  
XX  
PF 21-DEC-1999; 99WO-US30503.  
XX  
PR 22-DEC-1998; 98GB-0028377.

PR 18-MAR-1999; 99US-0124967.  
PR 08-NOV-1999; 99US-0164131.  
XX  
PA (JANC ) JANSSEN PHARM NV.  
XX  
PI Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJH, Gosiewska A;  
PI Dhanaraj SN, Xu J;  
XX  
DR WPI; 2000-442669/38.  
DR N-PSDB; AAA71952.  
XX  
XX New vascular endothelial growth factor protein, useful for treating or  
PT preventing diseases associated with inappropriate angiogenesis activity  
PT such as cancer, rheumatoid arthritis, psoriasis and wounds -  
XX  
PS Disclosure; Fig 7; 127pp; English.  
XX  
XX This invention describes a novel vascular endothelial growth factor-X  
CC (VEGF-X) protein (Ia) and its encoding polynucleotide (Iia) which has  
CC vulnery, cytostatic, antirheumatic, antiarthritic, antipsoriatic and  
CC antidiabetic activity and acts as an angiogenesis and vascularization  
CC regulator. An antisense molecule of the invention is useful for treating  
CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic  
CC retinopathy by inhibiting angiogenic activity or inappropriate  
CC vascularization including formation and proliferation of new blood  
CC vessels, growth and development of tissues, tissue regeneration and organ  
CC and tissue repair in a subject. The products of the invention are useful  
CC for preparing medicaments for treating wounds such as dermal ulcers,  
CC pressure sores, venous sores, diabetic ulcers and burns and to promote  
CC skin graft growth, tissue repair, proliferation of new blood vessels,  
CC tissue regeneration and organ repair by promoting angiogenic activity or  
CC vascularization. This sequence represents the human VEGF-X protein  
CC homologue described in the method of the invention.  
XX  
SQ Sequence 345 AA;  
  
Query Match 100.0%; Score 754; DB 21; Length 345;  
Best Local Similarity 100.0%; Pred. No. 6e-71;  
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLLTEEVRLYSCTPRNFSVSIREELKRTDTI 60  
Db 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscprnfsvsireelkrttdi 269  
  
QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRGLHKSITDVAL 120  
Db 270 fwpgccllvkrcggncaccclhncnecqvpstkvtkkyhevlqlrpkgtgvrghksitdval 329  
  
QY 121 EHHEECDCVCRGSTGG 136  
Db 330 ehheecdvcrgstgg 345  
  
RESULT 11  
AAB10635  
ID AAB10635 standard; Protein; 345 AA.  
XX  
AC AAB10635;  
XX  
DT 19-JAN-2001 (first entry)  
XX  
DE Human VEGF-X protein #1 isolated from clones 4 and 7.  
XX  
KW VEGF-X; vascular endothelial growth factor; human; vulnery; cytostatic;  
KW antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;  
KW angiogenesis regulator; vascularization regulator; cancer; psoriasis;  
KW rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;  
KW tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;  
KW venous sore; diabetic ulcer; burns; skin graft growth.  
XX  
OS Homo sapiens.  
XX

```
XX 19-JAN-2001 (first entry)
XX Human VEGF-X protein #4.
XX VEGF-X; vascular endothelial growth factor; human; vulnary; cytostatic;
XX antiarthritis; antiprosoratic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.
XX Homo sapiens.
XX OS
XX WO200037641-A2.
XX 29-JUN-2000.
XX 21-DEC-1999; 99WO-US30503.
XX 22-DEC-1999; 98GB-0028377.
XX 18-MAR-1999; 99US-0124967.
XX 08-NOV-1999; 99US-0164131.
XX (JANC ) JANSSEN PHARM NV.
XX Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJH, Gosiewska A;
XX Dhanaraj SN, Xu J;
XX WPI; 2000-442669/38.
XX N-PSDB; AAA/1990.
XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX Disclosure; Fig 30B; 127pp; English.
XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
XX vulnary, cytostatic, antirheumatic, antiarthritis, antiprosoratic and
XX antiangiogenic activity and acts as an angiogenesis and vascularization
XX regulator. An antisense molecule of the invention is useful for treating
XX or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
XX retinopathy by inhibiting angiogenic activity or inappropriate
XX vascularization including formation and proliferation of new blood
XX vessels, growth and development of tissues, tissue regeneration and organ
XX and tissue repair in a subject. The products of the invention are useful
XX for preparing medicaments for treating wounds such as dermal ulcers,
XX pressure sores, venous sores, diabetic ulcers and burns and to promote
XX skin graft growth, tissue repair, proliferation of new blood vessels,
XX tissue regeneration and organ repair by promoting angiogenic activity or
XX vascularization. This sequence represents a human VEGF-X protein
XX described in the method of the invention.
XX Sequence 345 AA;
XX Query Match 100.0%; Score 754; DB 21; Length 345;
XX Best Local Similarity 100.0%; Pred. No. 6e-71;
XX Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCPTPRNFVSIREELKRTDTI 60
Db 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscptprnfvsireelkrttdti 269
QY 61 FWPGCLLVKRCGGNCACCLHNCNCCQVPSKVTYKKEVHLQRLPKTGVRGLHKSITDVAL 120
Db 270 fwpgcllvkrcggncacclhncnccqvp skvtykkyhevlqlrpk tgvrglhksitdval 329
QY 121 EHHCECDVCVRGSGTG 136
Db 330 ehheecdvcvrgstgg 345
```

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```
RESULT 14
AAB10650
ID AAB10650 standard; Protein; 345 AA.
XX AAB10650;
AC AAB10650;
DT 19-JAN-2001 (first entry)
XX Human 990126vegX protein.
XX VEGF-X; vascular endothelial growth factor; human; vulnary; cytostatic;
XX antiarthritis; antiprosoratic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.
XX Homo sapiens.
XX OS
XX WO200037641-A2.
XX 29-JUN-2000.
XX 21-DEC-1999; 99WO-US30503.
XX 22-DEC-1999; 98GB-0028377.
XX 18-MAR-1999; 99US-0124967.
XX 08-NOV-1999; 99US-0164131.
XX (JANC ) JANSSEN PHARM NV.
XX Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJH, Gosiewska A;
XX Dhanaraj SN, Xu J;
XX WPI; 2000-442669/38.
XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX Disclosure; Fig 11; 127pp; English.
XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
XX vulnary, cytostatic, antirheumatic, antiarthritis, antiprosoratic and
XX antiangiogenic activity and acts as an angiogenesis and vascularization
XX regulator. An antisense molecule of the invention is useful for treating
XX or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
XX retinopathy by inhibiting angiogenic activity or inappropriate
XX vascularization including formation and proliferation of new blood
XX vessels, growth and development of tissues, tissue regeneration and organ
XX and tissue repair in a subject. The products of the invention are useful
XX for preparing medicaments for treating wounds such as dermal ulcers,
XX pressure sores, venous sores, diabetic ulcers and burns and to promote
XX skin graft growth, tissue repair, proliferation of new blood vessels,
XX tissue regeneration and organ repair by promoting angiogenic activity or
XX vascularization. This sequence represents the human 990126vegX protein
XX used to illustrate the method of the invention.
XX Sequence 345 AA;
XX Query Match 100.0%; Score 754; DB 21; Length 345;
XX Best Local Similarity 100.0%; Pred. No. 6e-71;
XX Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCPTPRNFVSIREELKRTDTI 60
Db 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscptprnfvsireelkrttdti 269
QY 61 FWPGCLLVKRCGGNCACCLHNCNCCQVPSKVTYKKEVHLQRLPKTGVRGLHKSITDVAL 120
Db 121 EHHCECDVCVRGSGTG 136
Db 330 ehheecdvcvrgstgg 345
```

KW	Mitogen; Growth factor; Glycoprotein; Signal.
FT	CHAIN 1 26 POTENTIAL.
FT	FT SIGNAL 27 190 VASCULAR ENDOTHELIAL GROWTH FACTOR.
FT	FT DISULFID 51 93 BY SIMILARITY.
FT	FT DISULFID 82 127 BY SIMILARITY.
FT	FT DISULFID 86 129 BY SIMILARITY.
FT	FT DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
FT	FT DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
FT	FT CARBOHYD 100 100 N-LINKED (GLCNAC..) (POTENTIAL).
SQ	SEQUENCE 190 AA; 22368 MW; 04D40B8D7913047F CRC64;
Query Match 13.6%; Score 102.5; DB 1; Length 190;	
Best Local Similarity 27.0%; Pred. No. 0.0017;	
Matches 24; Conservative 20; Mismatches 34; Indels 11; Gaps	
QY	41 CTPRNFVSYSIREEL-KRTDTHFWPGCLLVKRCGNCACCLHNCNECCQVPSKVTKYKHYEV 99
Db	51 CRPIETLVDFIQEYDPDIEYIFKPSCVPLMKRCGG--CC--NDEGLEUCVPTFEENFTMQI 105
QY	100 LQLRPKTVGRGLKSLTDDVALEHHEECDC 128
Db	106 MRIKPHQG-----QHIGEMSFLOHNRKCEC 129
RESULT 15	
VEGC_HUMAN	STANDARD; PRT; 419 AA.
AC	P49767;
DT	01-OCT-1996 (Rel. 34, Created)
DT	01-OCT-1996 (Rel. 34, Last sequence update)
DT	20-AUG-2001 (Rel. 40, Last annotation update)
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSOR (VEGF-C) (VASCULAR
DE	ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRP) (FLT4 LIGAND) (FLR4-
DE	L).
DE	VEGFC.
OS	Homo sapiens (Human).
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX	NCBI_TaxID=9606;
RN	[1]
RN	SEQUENCE FROM N.A., AND SEQUENCE OF 103-120.
RX	MEDLINE=96178224; PubMed=8617204;
RX	Joukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukk E.,
RA	Saksela O., Kalkkinen N., Alitalo K.;
RT	"A novel vascular endothelial growth factor, VEGF-C, is a ligand for
RT	the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases.";
RL	EMBO J. 15:290-298(1996).
RL	[2]
RP	ERRATUM.
RX	MEDLINE=96203094; PubMed=8612600;
RA	Joukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukk E.,
RA	Saksela O., Kalkkinen N., Alitalo K.;
RL	EMBO J. 15:1751-1751(1996).
RL	[3]
RN	SEQUENCE FROM N.A.
RX	MEDLINE=96312526; PubMed=8700872;
RA	Lee J., Gray A., Ruan J., Luch S.-M., Avraham H., Wood W.I.;
RT	"Vascular endothelial growth factor-related protein: a ligand and
RT	specific activator of the tyrosine kinase receptor Flt4.";
RL	Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
RL	[4]
RN	SEQUENCE FROM N.A.
RA	Fitz L., Morris J.C., Towler P.S., Long A.J., Greco R.,
RA	Burgess P., Giannotti J., Charletta A., Hennessey D., Kovacic S.,
RA	Fitzgerald M., Scaltreto H., Weich N., Neben S., Finnerty H.,
RA	Zollner R., Wang J., Nickbarg E., Gassaway R., Turner K.,
RA	Wood C.R.;
RL	Submitted (JUN-1996) to the EMBL/GenBank/DBJ databases.
CC	-!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
CC	CELL GROWTH.
CC	-!- SUBUNIT: HOMODIMER; DISULFIDE-LINKED.
CC	-!- PTM: PROBABLY PROTEOLYTICALLY PROCESSED IN THE C-TERMINUS.

PR 29-APR-1998: 98US-0083392.  
 PR 29-APR-1998: 98US-0083495.  
 PR 29-APR-1998: 98US-0083496.  
 PR 29-APR-1998: 98US-0083499.  
 PR 29-APR-1998: 98US-0083500.  
 PR 29-APR-1998: 98US-0083545.  
 PR 29-APR-1998: 98US-0083554.  
 PR 29-APR-1998: 98US-0083558.  
 PR 29-APR-1998: 98US-0083559.  
 PR 30-APR-1998: 98US-0083742.  
 PR 05-MAY-1998: 98US-0084366.  
 PR 06-MAY-1998: 98US-0084414.  
 PR 06-MAY-1998: 98US-0084441.  
 PR 07-MAY-1998: 98US-0084598.  
 PR 07-MAY-1998: 98US-0084600.  
 PR 07-MAY-1998: 98US-0084627.  
 PR 07-MAY-1998: 98US-0084637.  
 PR 07-MAY-1998: 98US-0084639.  
 PR 07-MAY-1998: 98US-0084640.  
 PR 07-MAY-1998: 98US-0084643.  
 PR 13-MAY-1998: 98US-0085323.  
 PR 13-MAY-1998: 98US-0085338.  
 PR 13-MAY-1998: 98US-0085339.  
 PR 15-MAY-1998: 98US-0085573.  
 PR 15-MAY-1998: 98US-0085579.  
 PR 15-MAY-1998: 98US-0085580.  
 PR 15-MAY-1998: 98US-0085582.  
 PR 15-MAY-1998: 98US-0085689.  
 PR 15-MAY-1998: 98US-0085697.  
 PR 15-MAY-1998: 98US-0085700.  
 PR 15-MAY-1998: 98US-0085704.  
 PR 18-MAY-1998: 98US-0086023.  
 PR 22-MAY-1998: 98US-0086392.  
 PR 22-MAY-1998: 98US-0086414.  
 PR 22-MAY-1998: 98US-0086430.  
 PR 22-MAY-1998: 98US-0086486.  
 PR 28-MAY-1998: 98US-0087098.  
 PR 28-MAY-1998: 98US-0087106.  
 PR 28-MAY-1998: 98US-0087208.  
 PR 30-JUL-1998: 98US-0094551.  
 PR 11-SEP-1998: 98US-0100038.  
 XX  
 PA (GETH ) GENENTECH INC.

XX  
 XX Wood WI, Goddard A, Gurney A, Yuan J, Baker KP, Chen J;

XX WPI: 1999-551358/46.  
 XX N-PSDB: AAZ34296.

XX New secreted and transmembrane polypeptides and their polynucleotides,  
 XX useful for treating blood coagulation disorders, cancers and cellular  
 XX adhesion disorders -

XX Claim 12; Fig 207; 530pp; English.

XX The present invention describes secreted and transmembrane polypeptides  
 XX and their polynucleotides. The nucleotide sequences are useful as  
 XX sources of probes, primers, for chromosome mapping, and for generation  
 XX of antisense sequences. They can also be used to create transgenic  
 XX animals. The proteins can be used to treat a variety of diseases and  
 XX disorders, depending on their function. Diseases that may be treated  
 XX include blood coagulation disorders, cancers and cellular adhesion  
 XX disorders. They may also be used to raise antibodies. AAZ33891 to  
 XX AAZ34338, and AAZ41685 to AAZ41774 represent polynucleotide and  
 XX polypeptide sequence given in the exemplification of the present  
 XX invention.

XX Sequence 345 AA;

XX Query Match 100.0%; Score 754; DB 20; Length 345;  
 XX Best Local Similarity 100.0%; Pred. No. 6e-71;  
 XX Matches 136; Conservative. 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCTPRNFSVSIREELKRTDTI 60  
 DB 210 ldledlyrptwqlgkafvgrkSRVVDNLNLTTEVRLYSCTPRNFSVSIREELKRTDTI 269  
 QY 61 FWPGLLVKRCGGNCACCLHNCNECQCVPKVKRYHEVLQLRPKTGVRLHKLSTLVAL 120  
 DB 270 fwpgcllvkrcggncacclhncncqcvpkvtkkyhevlqlrpkTgvrlhklstlval 329  
 QY 121 EHHEEDCVCRGSTGG 136  
 DB 330 ehheecdvcrgstgg 345

RESULT 5

AAAY30023

ID AAY30023 standard; Protein; 345 AA.

XX

AC AAY30023;

XX

XX 11-OCT-1999 (first entry)

XX Human vascular endothelial growth factor related protein.

XX Vascular endothelial growth factor related protein; VEGF-R protein;  
 XX tissue growth inhibition; tumour growth; cancer; tissue growth;  
 XX angiogenesis; coronary artery blockage.

XX Homo sapiens.

XX W09937671-A1.

XX 29-JUL-1999.

XX 26-JAN-1999; 99WO-US01574.

XX 31-AUG-1998; 98US-0098548.

XX 27-JAN-1998; 98US-0072635.

XX 05-JUN-1998; 98US-0088089.

XX 24-JUN-1998; 98US-0090544.

XX (ELIL ) LILLY & CO ELI.

XX Dou S, Na S, Song HY;

XX WPI: 1999-458680/38.

XX N-PSDB: AAX86352.

XX A vascular endothelial growth factor related protein and related  
 XX polynucleotide, useful for identifying antagonists and binding  
 XX compounds

XX Claim 1; Page 56-58; 62pp; English.

XX The present sequence represents a vascular endothelial growth factor  
 XX related (VEGF-R) protein. VEGF-R can be used in assays to identify  
 XX compounds that bind to it or that antagonize its activity. VEGF-R  
 XX antagonists (e.g. anti-VEGF-R antibodies) are useful for inhibiting  
 XX tissue growth. This is useful for inhibiting tumour growth and for  
 XX treating cancer. VEGF-R itself can be used to stimulate tissue  
 XX growth, angiogenesis and to treat coronary artery blockage. The  
 XX VEGF-R coding sequence can be used for the recombinant production of  
 XX the VEGF-R protein.

XX Sequence 345 AA;

XX Query Match 100.0%; Score 754; DB 20; Length 345;  
 XX Best Local Similarity 100.0%; Pred. No. 6e-71;  
 XX Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCTPRNFSVSIREELKRTDTI 60  
 DB 210 ldledlyrptwqlgkafvgrkSRVVDNLNLTTEVRLYSCTPRNFSVSIREELKRTDTI 269  
 QY 61 FWPGLLVKRCGGNCACCLHNCNECQCVPKVKRYHEVLQLRPKTGVRLHKLSTLVAL 120  
 DB 270 fwpgcllvkrcggncacclhncncqcvpkvtkkyhevlqlrpkTgvrlhklstlval 329  
 QY 121 EHHEEDCVCRGSTGG 136  
 DB 330 ehheecdvcrgstgg 345

Db 210 ldledlyrptwqlgkafvgrksrvvdlnllteevrlyscprnfsvsireelkrttdti 269  
QY 61 FWPGCLLVKRCGGNCACCLHNCNECQCVPKSKYKHYEVLQLRPKTGVRGLHSLTDVAL 120  
Db 270 fwpqcllvkrccgncacclhncnecqcvpskvtkkyhevliqlrpkgtvrglhlksltdval 329  
QY 121 EHHEECDCVCRGSTGG 136  
Db 330 ehheecdcvcrgstgg 345

RESULT 6  
AAB48657  
ID AAB48657 standard; Protein; 345 AA.  
XX AAB48657;  
XX 09-MAR-2001 (first entry)  
XX Human zvegfg3, SEQ ID NO:33.  
XX Human; zvegfg3; zvegfg4 fusion; growth factor homologue; VEGF/PDGF family;  
KW CUB domain; PDGF-like activity; mitogenic; osteogenic;  
KW neovascularisation; tissue repair; proliferation; differentiation;  
KW liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis;  
KW periodontal disease; bone fracture; wound healing; vulnery; ischaemia;  
KW immunomodulation; hepatic.  
XX Homo sapiens.  
XX OS  
XX PN WO200066736-A1.  
XX 09-NOV-2000.  
XX 03-MAY-2000; 2000WO-US40047.  
XX 03-MAY-1999; 99US-0304216.  
XX 10-NOV-1999; 99US-0164463.  
XX 04-FEB-2000; 2000US-0180169.  
XX (ZYMO) ZYMOGENETICS INC.  
XX Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;  
XX WPI; 2000-687541/67.  
XX N-PSDB; AAC81582.  
XX Growth factor homologs and the nucleic acids that encode them, useful  
PT e.g. for treating liver damage, ischaemia, multiple sclerosis and  
PT Alzheimer's disease  
XX Claim 48; Page 125-126; 143pp; English.

CC The invention relates to the human growth factor homologue zvegfg4  
CC (AAB48653), and nucleic acids encoding it (AAC81555). zvegfg4 is a member  
CC of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial  
CC growth factor) family. zvegfg4 has a growth factor domain (AAB48654)  
CC characterised by a PDGF cysteine knot structure, and a CUB domain  
CC (AAB48655) which has a beta barrel structure. zvegfg4 has PDGF-like  
CC activity, having mitogenic activity on fibroblasts, vascular smooth  
CC muscle cells and pericytes, and has also been shown to stimulate bone  
CC growth. The invention also relates to fusion proteins comprising human  
CC zvegfg4 or fragments thereof, particularly human zvegfg4/human zvegfg3  
CC fusions; expression constructs and host cells comprising human zvegfg4  
CC nucleic acids; the recombinant expression of human zvegfg4; an antibody  
CC which binds to human zvegfg4 or a fragment thereof; a method of activating  
CC a cell-surface PDGF receptor using a zvegfg4-derived polypeptide; a  
CC method of modulating the proliferation, differentiation, migration or  
CC metabolism of bone cells, comprising exposing bone cells to  
CC zvegfg4-derived polypeptides; and a method of detecting a genetic  
CC abnormality in the zvegfg4 gene of a patient. zvegfg4 proteins and derived  
CC fragments may be used to stimulate tissue development or repair, or  
CC cellular differentiation or proliferation. They are particularly used for

CC the treatment or repair of liver damage, and may also be used to  
CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or  
CC multiple sclerosis). Due to their osteogenic activity, they may be used  
CC in the treatment of periodontal disease and fractures. They may also be  
CC used to enhance expansion and mobilisation of haematopoietic stem cells  
CC and endothelial precursor stem cells, which may be useful in the  
CC treatment of ischaemia, in wound healing, and in the modulation of the  
CC immune system. The present sequence represents human zvegfg3.  
XX  
SQ Sequence 345 AA;

Query Match 100.0%; Score 754; DB 21; Length 345;  
Best Local Similarity 100.0%; Pred. No. 6e-71;  
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDLNLTEEVRLYSCTPRNFSVSIREELKRTDTI 60  
Db 210 ldledlyrptwqlgkafvgrksrvvdlnllteevrlyscprnfsvsireelkrttdti 269  
QY 61 FWPGCLLVKRCGGNCACCLHNCNECQCVPKSKYKHYEVLQLRPKTGVRGLHSLTDVAL 120  
Db 270 fwpqcllvkrccgncacclhncnecqcvpskvtkkyhevliqlrpkgtvrglhlksltdval 329  
QY 121 EHHEECDCVCRGSTGG 136  
Db 330 ehheecdcvcrgstgg 345

RESULT 7  
AAB24250  
ID AAB24250 standard; Protein; 345 AA.  
XX AAB24250;  
XX 08-FEB-2001 (first entry)  
XX Human platelet-derived growth factor related protein LP8.  
XX Human; platelet derived growth factor related protein; LP8; VEGFh;  
KW vascular endothelial growth factor h; tissue regeneration; vulnery;  
KW atherosclerosis; PDGF-related protein; antiarteriosclerotic.  
XX Homo sapiens.  
XX OS  
XX PN WO200059940-A2.  
XX 12-OCT-2000.  
XX 24-MAR-2000; 2000WO-US06427.  
XX 06-APR-1999; 99US-0127913.  
XX (ELIL) LILLY & CO ELI.  
XX Hammond LJ, Na S;  
XX WPI; 2000-664991/64.  
XX N-PSDB; AAC64426.  
XX Enhancing tissue growth and promoting wound healing by administering  
PT platelet-derived growth factor related protein, LP8 or its analog and  
PT treating atherosclerosis by administering LP8 antagonist  
XX Claim 4; Page 63-64; 64pp; English.  
XX The present invention describes a method for enhancing tissue growth,  
CC promoting wound healing or stimulating smooth muscle growth by  
CC administering a platelet-derived growth factor (PDGF) related protein,  
CC designated LP8 or its analogue. Also described is a method of slowing  
CC the progress of atherosclerosis or treating atherosclerosis comprising  
CC the administration of an LP8 antagonist. The method is useful for  
CC enhancing tissue growth, promoting wound healing and stimulating smooth